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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,561	09/07/2000	Chennur Radhakrishna Reddy	11378.21US01	2020

23552 7590 08/13/2002

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EXAMINER

MCCORMICK, SUSAN B

ART UNIT	PAPER NUMBER
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1661

DATE MAILED: 08/13/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,561

Applicant(s)

REDDY ET AL.

Examiner

Susan B. McCormick

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Detailed Action

The amendment filed May 22, 2002, is hereby acknowledged and entered as paper number 8 in the case file wrapper.

Petition for Colored Drawings

Color photographs and color drawings are acceptable only for examination purposes unless a petition filed under 37 CFR 1.84(a)(2) is granted permitting their use as acceptable drawings. In the event that applicant wishes to use the drawings currently on file as acceptable drawings, a petition must be filed for acceptance of the color photographs or color drawings as acceptable drawings. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and an amendment to the first paragraph of the brief description of the drawings section of the specification which states:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the U.S. Patent and Trademark Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings have been satisfied.

Response to Claim Rejection- 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, 8, 15 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2, 3 and 18 are indefinite and grammatically incorrect because there is a singular/plural disagreement with the terms "algae" and "calli." The singular for both term are --alga-- and --callus--. Correction is needed.

Claim 8, the term "is" is used in the singular sense for the term "calli." It is suggested to use the term --are--.

Claim 15 is indefinite as the term "enhanced" is still not clear as to what is the nature of the enhancement is, as previously stated (paper no. 6, p. 2). Applicant argues the addition of plant growth

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regulators will enhance the formation of somatic embryogenesis (paper no. 8, p. 5). This is not persuasive because the example cited is not a definition of "enhancement."

Response to 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dawes et al. in view of Mairh et al., as previously stated for claims 1-17 (paper no. 6, p. 3). Applicant argues that the prior art drawback resulted in the decrease of the daily growth rate of the alga grown in open waters compared to those grown in open waters without polyethylene bags. This is not persuasive as the decrease of growth depends upon the time of the year. It also shows the protection of the polyethylene bags used that helped the plants survive greater at different depths. The advantage of the bag is greater % survival- see p. 28 of reference. Also the specification says the solution to the slow growth problem is a faster growing strain, which is not claimed.

Applicant argues that the main drawback of micro-propagation is that the progeny will possess only parental features and does not have a pronounced advantage over the parental populations in expression of desired traits (paper number 8, p. 6). This is not persuasive since the claimed method is also a form of asexual reproduction and so the resulting progeny should possess the traits of the parent.

Applicant argues the Mairh et al. reference does not tissue culture plantlets and did not used them in open sea conditions. The fact that the Applicant did not use tissue culture plants is irrelevant because the rejection is over the combination of references. Applicant has not presented any evidence to suggest that the skilled artisan would not have expected the bag method to work the same with tissue culture plantlets.

Applicant argues the cited references does not teach or suggest the calli subcultured obtains a filamentous calli (p. 7 of response). Dawes et al. obtained this with high NAA in the medium (p. 252). It is well known that hormone concentrations affect morphology and would have been obvious to optimize hormones for any given species.

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Applicant argues that the present invention provides development of fast growing strains under *in vitro* conditions. The Dawes et al. method also allows for selection of new strains (see p. 255, col.2). It would be obvious to select for fast growing strains.

Applicant claims that the present invention of plantlets obtained is through germination of somatic embryos (page 5 of response). This argument is not persuasive because "somatic embryos" is a term associated with vascular plants. See Campbell et al. (compare life cycle of alga [FIGURE 28.21] with life cycle of flowering plant, which has an embryonic stage [FIGURE 38.1]). The only apparent difference between the micropropagules of the prior art and those produced by the claimed method is that Applicants are now using the term "somatic embryo." Absent further evidence and/or explanation of the alleged difference between the products produced by the claimed invention and the prior art method, this line of argument is not persuasive.

Summary

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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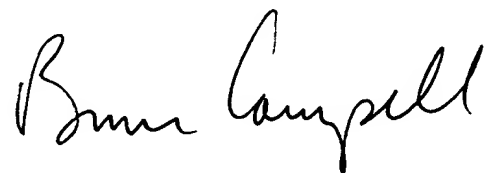
Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Susan B. McCormick whose telephone number is (703) 305-1682. The Examiner can normally be reached Monday through Thursday from 7:00 a.m. to 4:30 p.m. and alternate Fridays from 7:00 a.m. to 3:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Bruce Campell, can be reached on (703) 308-4205. The fax number for the group is (703) 305-3014 or 308-4242.

Any inquiry of a general nature or relating to the status of this application should be directed to the Matrix Customer Service Center whose telephone number is (703) 308-0196.

sbm

A handwritten signature in black ink, appearing to read "Bruce Campell". The signature is written in a cursive, flowing style.

BRUCE R. CAMPELL, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600